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PCT/JP2003/008551

From the INTERNATIONAL BUREAU

To:

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 TAMURA PATENT OFFICE  
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**NOTIFICATION OF TRANSMITTAL  
 OF COPIES OF TRANSLATION  
 OF THE INTERNATIONAL PRELIMINARY  
 EXAMINATION REPORT**  
 (PCT Rule 72.2)

Date of mailing (day/month/year)  
 21 April 2005 (21.04.2005)

Applicant's or agent's file reference  
 POKJ-10301

**IMPORTANT NOTIFICATION**

International application No.  
 PCT/JP2003/008551

International filing date (day/month/year)  
 04 July 2003 (04.07.2003)

Applicant

KAJIHARA, Yasuhiro et al

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

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**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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## PATENT COOPERATION TREATY



## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|   |   |   |                       |
|---|---|---|-----------------------|
| Applicant's or agent's file reference<br>POKJ-10301   | <b>FOR FURTHER ACTION</b>   |   | See Form PCT/IPEA/416 |
| International application No.<br>PCT/JP2003/008551  | International filing date (day/month/year)<br>04 July 2003 (04.07.2003) | Priority date (day/month/year)<br>05 July 2002 (05.07.2002) |                       |
| International Patent Classification (IPC) or national classification and IPC<br>C07K 9/00, I/04, 1/06, C08B 37/00 |   |   |                       |
| Applicant<br>KAJIHARA, Yasuhiro   |   |   |                       |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a.  (*sent to the applicant and to the International Bureau*) a total of 5 sheets, as follows:

sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b.  (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

|                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

|   |   |
|---|---|
| Date of submission of the demand<br>03 February 2004 (03.02.2004) | Date of completion of this report<br>21 May 2004 (21.05.2004) |
| Name and mailing address of the IPEA/JP                           | Authorized officer  |
| Facsimile No.   | Telephone No.   |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/008551

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- international search (under Rules 12.3 and 23.1(b))
  - publication of the international application (under Rule 12.4)
  - international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

- The international application as originally filed/furnished

the description:

pages \_\_\_\_\_ 1-68 \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:

pages \_\_\_\_\_ 5-12, 15, 18-21 \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19

pages\* \_\_\_\_\_ received by this Authority on 30 April 2004 (30.04.2004)

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:

pages \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_ 13, 14, 16 \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (specify): \_\_\_\_\_

any table(s) related to sequence listing (specify): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (specify): \_\_\_\_\_

any table(s) related to sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

|                               |
|-------------------------------|
| International application No. |
| PCT/JP 03/08551               |

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

|                               |        |                               |     |
|-------------------------------|--------|-------------------------------|-----|
| Novelty (N)                   | Claims | <u>1-12, 15, 17-19, 20-21</u> | YES |
|                               | Claims |                               | NO  |
| Inventive step (IS)           | Claims | <u>1-12, 15, 17-19, 20-21</u> | YES |
|                               | Claims |                               | NO  |
| Industrial applicability (IA) | Claims | <u>1-12, 15, 17-19, 20-21</u> | YES |
|                               | Claims |                               | NO  |

## 2. Citations and explanations

- Document 1: JP 10-259198 A (Sankyo Co., Ltd.), 29 September 1998
- Document 2: WO 94/8711 A1 (Warner-Lambert Company), 19 March 1994
- Document 3: Bioorganic & Medicinal Chemistry, Vol. 3 (11), pp. 1455-1463 (1995)
- Document 4: JP 11-255807 A (The Noguchi Institute), 21 September 1999
- Document 5: Carbohydrate Research, Vol. 305, pp. 423-431 (1998)
- Document 6: FEBS Letters, Vol. 93 (2), pp. 255-260 (1978)
- Document 7: The Journal of Biological Chemistry, Vol. 254 (10, pp. 4063-4071 (1979)
- Document 8: Biochemical Journal, Vol. 250, pp. 117-124 (1988)

The inventions set forth in claims 1-12, 15, 17-19 and 20-21 are novel and involve an inventive step. The inventions of a production process set forth in claims 1-12 and 17-19 are unique in the discovery that sugar chain asparagine can be used in the solid phase synthesis of a peptide without protecting hydroxyl groups, and the invention of glycopeptides set forth in claim 15 is unique in that a protective group is introduced onto the carboxyl

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

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group of sialic acid. These features are not disclosed or suggested in documents 1-8. The inventions of a production process set forth in claims 20-21 are also not disclosed or suggested in documents 1-8.